eight stitches and bandages, and directed to keep the wound wet with spirit and water. The dressings were removed on the third day. The wound was sloughing, and throwing off very offensive matter; had every appearance of commencing sphacelation; yellow vesications appeared about the edges; it was so offensive as to contaminate the room. There was constitutional irritation; pulse 120 in a minute, and feeble; countenance pale and ghastly, and continual twitching of the nerves and tendons; stomach very irritable, and slight delirium. We directed the use of musk and aqua ammonia. As there was no malt at hand, we used the oatmeal and charcoal poultice boiled in beer and covered with yeast. The next day there was but little amelioration of his symptoms. The wound was sloughing horribly, and the skin in the neighbourhood of it was covered with vesications filled with yellow serum. His case was considered critical indeed. In the course of the day we were so fortunate as to procure some barley malt, with which a poultice was prepared in the usual way, and applied to the wound. In twenty-four hours all danger from mortification was past. The wound was shortly filled with healthy granulations, and the patient ultimately recovered.

Such is but a small part of the evidence I have in favour of the malt poultice in mortification and foul sloughing ulcers. It is much to be hoped that it will come into more extensive use with the faculty.

Deerfield, Massachusetts, Sept. 1831.

ART. IV. *Case of Penetrating Wound of the Abdomen and Section of the Intestinal Canal, successfully treated upon the Plan of Ramdohr, with Remarks.* By ZINA PITCHER, M. D., U. S. Army.

MR. Nicholas Miller, a citizen of the Cherokee nation west of the Mississippi, was stabbed on the 22d of June, 1831, with a butcher's knife, by the hand of a white desperado. The instrument entered the abdomen just where the spermatic cord passes out through the left internal abdominal ring, passed upward and inward towards the median line, making an incision three inches in extent in the external teguments, and an opening still larger in the peritoneal sac, so that the shape of the wound, and the attitude in which it was received, the patient leaning forward at the time, permitted an immediate escape of several feet of his intestines with their extravasated contents, from the cavity of the abdomen.

On arriving at his house, which was within an hour after the injury had been inflicted, I found him lying on his back, with his shoulders elevated and his knees drawn upward to support the protruded bowels, while the hand of a friend kept them from falling over the side. His skin was covered with a cold and clammy exudation, his stomach heaved, and his heart and lungs laboured, and were oppressed. In this position his stomach had discharged its contents, which being mixed with the fecal effusions from the colon, and the blood from some wounded branches of the mesenteric artery, produced momentary confusion, and gave the wound a formidable and unpromising aspect.

On examining the protruded viscera, it was ascertained that the knife in passing across the abdomen had divided the ileum diagonally, and separated two inches of the lower portion from the mesentery. The fold of intestine in contact with this was cut on its convex side two-thirds across; two other convolutions were transpierced, and the left iliac colon was partially opened in the direction of its circular fibres.

The first step in our attempt to restore the displaced bowels, after giving ʒii. tinct. opii, to relieve the patient from the sensation of sinking, was to secure the bleeding branches of the mesenteric artery, (three in number,) by single thread ligatures, the ends of which were cut close to the knots. My next object was to bring together the dissevered ends of the ileum. This I effected by passing a ligature through the upper portion from without inward, thence into the lower part and out again, including half an inch of intestine in the stitch, then returned it through the upper end from within outward, drew it close, and cut the ends short off. Three sutures of this kind made the intus-susception complete. The other openings were closed by continued sutures, (except that of the colon, for which a single stitch was sufficient,) the ends of which were left long, and so tied as to hang within the gut. Thus much accomplished, the intestines were sponged clean with warm milk and water, gradually and without impediment returned into the abdomen. Some pieces of the epiploon which had been injured by the knife were cut away, and the external wound closed by half a dozen turns of the continued suture. A slight hæmorrhage still continued from the external angle of the incision, which seemed to come from the spermatic sheath. I managed by position to conduct the blood out of the wound, applied a compress wet with spirit and water, and kept it in place by a modification of the T-bandage. After giving another dose of the anodyne, (ʒi.) and directing to have it repeated hourly till the pain

should abate, I left Mr. Miller at 6 P. M. two hours after the receipt of the injury, in great pain, with a small, frequent pulse, and a cold and moist skin.

23d. Stomach rejected the opiate once, after which it was twice repeated, when he became easy, and before midnight was asleep. Now free from pain and inclined to dose. Put him upon a diet of connahanah,* and give him to drink cold water containing the mucilage of the *Ulmus alata.*

Evening. No pain or fever. Ordered the bowels opened by an enema, and one to be given at bed-time containing ℥i. tinct. opii.

24th. Had rigors at 8 o'clock this morning; the pulse is full and frequent, with heat of skin. I took ℥xv. of blood; bathed the abdomen with warm water; changed the dressings, and left him at 11 A. M. with a soft pulse and a moist skin. There is a little tumefaction about the wound. Ordered ℥i. nitric ether every hour in cold water; diet and drink continued.

Evening. Has perspired through the day; pulse full, but softer and slower than it was in the morning. The scrotum is blackened with extravasated blood. Continue nitric ether every two hours, and order an anodyne enema to be given if he should become restless in the night.

25th. Has slept well; eructations frequent; pulse 80 in a minute, increased in hardness, but a gentle moisture upon the face. Gave a saponaceous enema, but it returned without feces. Bathed the abdomen with warm water, and ordered it repeated frequently during the day. As he complains of gastric sinking, I allowed him to have small quantities of animal broth in place of his connahanah.

Evening. Feels better at stomach; skin hot; respiration hurried; pulse not so hard. Ordered an anodyne enema; cold drinks; and evaporating lotions to the abdomen.

26th. Rested well last night; has vomited some bile; nausea continues this morning; pulse soft, and skin cool. Directed a saline injection; continue gruel and iced water.

Evening. Vomited more bile after taking the enema, which looked as if mixed with feces; bowels moved twice; the attendants report a discharge of pus per anum. These motions have increased the irritation within the abdomen; there is now thirst, jactitation, hardness and frequency of pulse, but not much febrile heat. Gave ℥ii. tinct.

* Connahanah is a Cherokee dish, prepared from the Indian corn much after the same manner as the sowens of the Scotch is from the oat-meal. It is liquid, and agreeably acid.

opii per anum, and defer blood-letting till morning, with a view to ascertain whether this commotion depend upon an irritated or an actively inflamed state of the viscera. Diet, drinks, and local applications continued.

27th. Miller slept the after part of the night, and had slight perspiration. His skin is now cool; tongue clean and moist; respiration natural; pulse soft and frequent; urinary discharge copious. The eructations are frequent; food becomes acid, and is occasionally ejected from the stomach. Ordered an alkali to be taken with his food.

Evening. No bilious vomiting to-day; no pain; no fever; external wound suppurating; abdomen a little bloated. Has taken to-day a little squirrel water. Regimen continued.

28th. Had a good night's rest without an opiate; pulse frequent, but soft; skin cool; distention of bowels increased; move them by an enema; stool natural; wound suppurating. Treatment same.

Evening. Bowels still tense; strong pulsations in the carotids; pulse hard; respiration laborious; temperature a little augmented. As the inflammation about the external wound is not extending, I defer the bleeding once more, though the other appearances seem actually to call for it.

29th. He has slept well the greater part of the night, and was permitted to eat an egg for breakfast. His voice, which had become sepulchral from inanition, is stronger, and the expression of his countenance more animated. Skin warm; pulse strong and jerking, or vermicular, the carotids throb violently, and the abdomen is distended and tympanitic. He was bled from a large orifice till the artery at the wrist was diminished in volume and force. Regimen continued.

Evening. Bowels moved spontaneously several times to-day. Gave xl. min. tinct. opii.

30th. Slept well last night, and is easy to-day.

Evening. Diarrhœa returned after dinner; check it again with laudanum.

July 1st. Improving. Diet increased.

Evening. Distention of the abdomen has subsided.

2d. Still getting better. Had a discharge of pus and coagulated blood from the wound to-day.

4th. Wound discharging healthy pus. Quantity of food increased.

5th. Adhesion of the external wound is completed. No discharge of matter except at the openings made by the sutures. Remove the ligatures, and apply compression by means of adhesive straps.

6th. A small collection of matter formed from the cut edges of the abdominal muscles was discharged this morning through an aperture

caused by one of the stitches. Apply a wet compress, and renew the straps.

7th. Discharge diminished; the patient can sit up.

9th. No discharge; no stool to-day.

10th. Bowels still costive. R. ℥ij. sulphur in treacle.

11th. Bowels regular; appetite good; external wound entirely healed, and Mr. Miller begins to walk out.

Dec. 24th, 1831.—Mr. Miller arrived at this station this morning, having been absent some time on a journey, which he performed on horseback. He rides with accustomed ease, but is obliged to wear a pad and belt, on account of liability to hernial protrusion.

Remarks.—In the adoption of measures to effect a restoration of function in the case detailed above, of divided intestine, I was not influenced by any predilection entertained for the plan pursued, but acted in accordance with an opinion formed at the time of its expediency, after a careful examination of the injured parts. Having put in practice the plan of invagination in preference to that of retaining the cut ends in apposition by interrupted sutures, as recommended by Mr. S. Cooper, (see *Surgical Dictionary*, *Art. Wounds,)* and so vehemently insisted upon by the ardent and accomplished Mr. John Bell, in his Treatise on Wounds, it is my purpose at this time merely to give the reasons for doing so.

The free retraction of the lower portion of the gut, owing to the wound in the mesentery, and the dissection of the intestine therefrom, together with the full eversion of the villous coat, so accurately described by Mr. Travers, (see Treatise on Injuries of the Intestines, page 85,) gave me reason to dread the consequences of effusion, and to apprehend failure if I should attempt to promote reünion by the introduction of two or three stitches only, as practised in the experimental cases of Sir A. Cooper and Drs. Thomson and Smith. In the adoption of either method, there is a serious impediment to the healing process presented in the nature of the organization of the parts necessarily brought into contact; in one case mucous coat meets mucous coat, and in the other there is the heterogeneous junction of a mucous with a serous tissue; so that complete success at last seems to depend upon the firmness and extent of collateral adhesions. If this observation be true, and we have authority to think it is so, it appears to me that the Ramdohrian method of treating lesions of this sort, presents to the practical man the fairest prospects of preserving the functional integrity of the alimentary canal, unless it can be shown that the danger of introversion in one case is paramount to the chances of extravasation in the other.

The nature of the accident compelled me to make another deviation from authorized usage. This was the insertion of the lower portion of the ileum into the upper. I did this because the lower end had been already, by the butcher's knife, freed from its connexion with the mesentery, in which I found the chief impediment to this mode of junction. The peristaltic contractions occasioned by handling the bowels, embarrassed the operation very considerably, but that difficulty was overcome by the manner of passing the ligatures already described. The risk, or rather fear of inversion of the part inserted, appears to me to be altogether chimerical, for the action of the longitudinal fibres tends constantly to produce an opposite result.

Should no other circumstance attendant upon the foregoing case render it worthy of record, the fortitude of Miller ought alone to do so, for the heroic firmness which he evinced amidst the pains of the operation, and with which he subsequently submitted to dietetic restrictions, were worthy of the cause of martyrdom.

Cantonment Gibson, Dec. 24th, 1831.

ART. V. *Report to the Trustees on the State of the Medical Department of the Baltimore Alms-house Infirmary, for the year ending the 30th of April,* 1831. By THOMAS H. WRIGHT, M. D. Physician to the Institution.

TO the annual report on the state of the medical department of the institution, together with a summary of diseases, and their results, for the year just expired, I respectfully beg leave to add some remarks suggested by the circumstances of the period comprehended in that report, and which remarks I hope the trustees will not deem out of place, or unsuited either to the nature and objects of my station in the house, or the duty I have just had occasion to perform.

In the summary of diseases and their results, herewith submitted to the trustees, they find an aggregate of two thousand five hundred cases treated; two thousand cured or relieved; two hundred and eighty-six died; and between two and three hundred remaining in hospitals. The aggregate of cases is drawn from a special register, kept by the senior student, designed to embrace all cases treated, whether brought from abroad or originating in the house. The monthly hospital returns, herewith annexed, made up of cases in hospital at the end of every month, give an aggregate of three thousand pa-